RADIO CITY PRODUCTS COMPANY

MODEL 324

OPERATING INSTRUCTIONS

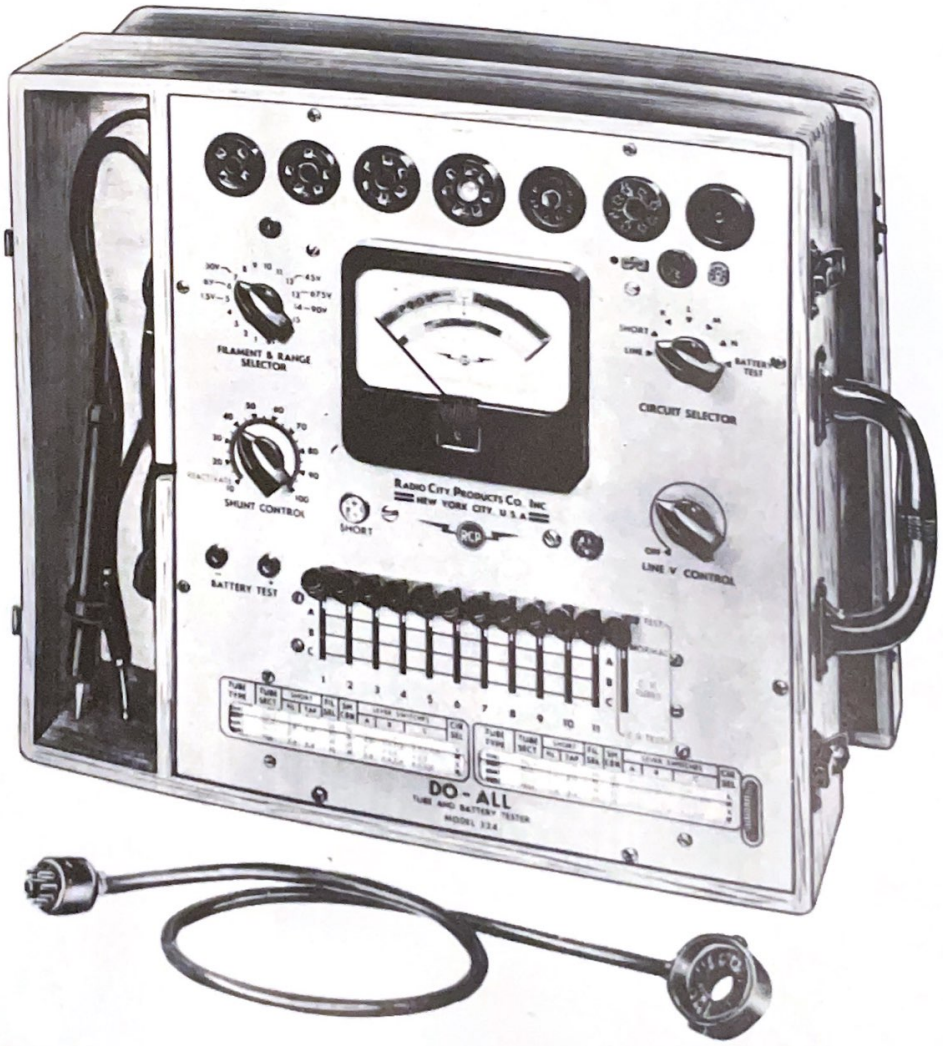
RADIO CITY PRODUCTS COMPANY
CENTRE at GLENDALE STREETS
EASTON, PA.

RADIO CITY PRODUCTS COMPANY, INC.

MODEL 324

OPERATING INSTRUCTIONS

RADIO CITY PRODUCTS COMPANY, INC.
Centre & Glendale Streets
Easton, Pennsylvania



R.C.P. MODE

The DO-ALL TUB
in one compact unit

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2) TV CA
3) TV CA
4) BATTE

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R.C.P. MODEL 324 OPERATING INSTRUCTIONS

The DO-ALL TUBE AND BATTERY TESTER, MODEL 324, includes in one compact unit:

1) A complete VACUUM TUBE TESTER
2) TV CATHODE RAY (PICTURE) TUBE TESTER
3) TV CATHODE RAY TUBE REACTIVATOR
4) BATTERY TESTER

Because if its compact, all-inclusive construction, Model 324 can test voltages, resistances, etc., and the quality of TV Tubes, as well as ALL RADIO, BALLAST AND SUBMINIATURE TUBES.

It is important that the operating instructions be read thoroughly before attempting any test or before using the BATTERY TESTER. Damage may be done to both the instrument and the tube (under test) if proper sequence is not followed in using any tester.

GENERAL

This instrument has been designed to permit speed and simplicity in servicing, ease of maintenance and reduced possibility of damage. It should be used on a 115 volt A line where the variation does not exceed 105 or 130 volts. A protective one ampere line fuse is mounted on a bakelite board inside the instrument. This fuse must be replaced when it is "blown".

The meter, a high torque alnico movement, is also protected against burn out by a meter fuse which will blow out only on overloads that will damage the meter. Should the meter fuse blow out, replace with a 1/16 ampere fuse type 8AG manufactured by Littlefuse. It is important that this fuse not be replaced by any value other than 1/16 ampere. Otherwise, errors may result, or worse, the meter may be burned out.

R.C.P. MODEL 324 OPERATING INSTRUCTIONS

TO USE AS A TUBE TESTER

The tube tester is a versatile, free point type testing instrument. Its switching and circuit design enables the user to test any type of receiving tube regardless of filament voltage or base wiring, including four pin, five pin, six pin, seven pin, octal, loctal, miniature seven pin, subminiature rectangular, subminiature eight pin, nine pin, pilot lights and ballast tubes. Lever switches provide the flexibility necessitated by the constant development of new tubes. The circuit is so arranged that all tests are made under voltages and loads standardized by the Radio Manufacturer's Association.

All multi-purpose tubes have individual listings for each section. This instrument is capable of testing tubes for internal shorts, inter-electrode leakage, filament continuity and quality.

The controls on the front panel are used as follows: The "Filament & Range Selector" switch selects filament voltage. The "Shunt Control" is used to adjust the sensitivity of the meter for proper deflection. The "Circuit Selector" switch affords quick choice of the type of measurement to be performed. The "numbered Lever Switches" correspond to the RMA standard numbering of the socket terminals and in each instance connects to that socket terminal. With the lever switches in the "N" (normal) position all elements of the tube are disconnected. The "A" position provides contact of the tube elements selected to the filament voltage. The "B" position makes contact to the common or return circuit and the "C" position applies the proper voltage to the tube. The "Line V Control", which should be set, as later explained, before every test, is used to compensate for variations in line voltage. In the fully counter-clockwise position it serves as a "power off" switch - disconnecting the instrument from one side of the line.

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When testing tubes
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ROLL CHART:

The roll chart bui
information about the
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setting is shown below

Tube Type	Tube Sect.	Shor Fil
7E5	TRI	8

The 7E5 tube is
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Leakage test on page
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INSTRUCTIONS

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R.C.P. MODEL 324 OPERATING INSTRUCTIONS

For complete accuracy, set the meter pointer to zero, by means of the screw in the meter case, before any voltage is applied.

When testing tubes which have metal caps at the top, it is necessary to use the detached grid clip lead. Simply plug this lead into the pin jack "cap" near the upper left hand corner of the panel and attach the other end to the cap of the tube. Lever switch #10 controls this element.

ROLL CHART:

The roll chart built into this unit gives complete information about the tube, and therefore elminates the necessity of using a tube basing diagram. A sample chart setting is shown below:

Tube Type	Tube Sect.	Short Fil	Short Tap	Fil Set	Sh Con	Lever Switches A	Lever Switches B	Lever Switches C	Cir Sel
7E5	TRI	8	3,7	8	60	2	4,6,8	1,3,5,7	L

The 7E5 tube is a triode; one leg of the filament is pin 8, (see Filament Continuity on page 5); one element of the tube has a double pin connection 3 & 7 (see Short-Leakage test on page); the filament selector should be set to position 8; the Shunt Control to 60; Lever Switch 2 to position "A".

For the quality test set lever switches 4, 6, & 8 to position "B" and lever switches 1,3,5, & 7 to position "C", the circuit selector to position L. Particular attention should be given to see that the tube to be tested is <u>not</u> inserted in the tube tester socket until <u>AFTER</u> #1 through #7 below have been completed.

R.C.P. MODEL 324 OPERATING INSTRUCTIONS

Lines are included on the Roll Chart at the end of each number, i.e., tubes starting with 6, 12, etc., to permit the addition of new tube data directly on the Roll Chart.

I. SHORT AND LEAKAGE TEST

1. Set "Line V" control to the "OFF" position by turning knob fully counter-clockwise.

2. Connect Power cord to 105-125 volt, 60 cycle supply. (Normal 110V AC outlet.)

3. Set Roll Chart to the number or type of the tube to be tested. Note column under A of "LEver switches" and set lever switch number indicated to the "A" position.

4. Set ALL OTHER lever switches involved to the "B" position. (For example; if a tube with an octal base is to be tested, lever switches one (1) thru eight (8) are used. If a tube with a nine pin base is to be tested, lever switches one (1) thru nine (9) are used. If a tube has a plate or grid cap, lever switch ten (10) must also be used.)

5. Set "Circuit Selector" to "Line" position.

6. Set "Filament Selector" switch to reading listed under "Fil. Sel." on Roll Chart.

7. Set "C.R. Test" lever switch to "Normal" position.

Note: During all the following continuity and short-leakage tests the tube should be lightly tapped to detect loose elements. This will show up as fluctuating readings on the meter.

1. Advance "Line V" pot
until the meter poi
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2. Set "Circuit Select
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Refer to column on Ro
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Refer to column on Roll Chart titled "Short-Fil" and move the indicated lever switches, ONE AT A TIME, to the "C" position and return immediately to the "B" position. During this operation the "Short" lamp should glow when switch is at "C". After each of the switches noted under the "Short-Fil" listing has been tested individually, they should be moved in one group to the "C" position and simultaneously returned to the "B" position. Again the "Short" lamp should glow when the switches are in the "C" position. If the "Short" lamp fails to glow during any of the above tests, the tube should be rejected as having an open filament section.

Note: Because the tube cools off rapidly this test should be performed as quickly as possible to prevent excessive cooling of the tube for succeeding tests.

B. Element Short and Leakage Test

Refer to the Roll Chart "SHORT-TAP" column and move all lever switches in one group simultaneously under this listing to the "C" position. (Groups are separated by a colon (:), thus, if more than one element has a double pin connection, the chart will read as follows: for example - 2,4: 3,6: The 2 and 4 pins are one element, and the 3 and 6 pins are another element.) The "Short" lamp should not glow. If the "Short" lamp glows the tube has a shorted element and should be discarded. Continuing the test, the lever switches now at "C" should be moved ONE AT A TIME to the "B" position and left there. The "Short" lamp SHOULD glow from the time the first through the last lever switch is moved from "C" to "B". If it does not glow, the tube should be rejected as having an open element.

B. Element Short and Leakage Test (Cont'd.)

The remaining lever switches, other than those noted under "Short-Fil" or "Short-Tap" columns, previously set to the "B" position should then be moved, ONE AT A TIME, to the "C" position and returned to the "B" position. The "Short" lamp should not glow when the switch is in the "C" position. Some tubes, having a filament voltage of 25 volts or higher, will sometimes indicate Cathode leakage resulting in a dull glow in the "Short" lamp, when the cathode pin or pins are in the "C" position. This is not necessarily objectionable. To determine if the tube is good, move the filament Selector to the next lower position, for this test only. The "Short" lamp should to out. If it does not, the tube should be rejected for excessive leakage.

Before performing the quality test, [illegible] the Circuit Selector switch to the "Line" position and all the lever switches to the "N" position. Set "Line V" potentiometer to "OFF" position.

II. QUALITY TEST

Refer to Roll Chart for the tube to be tested and:

1. Set "Filament Selector" switch to reading listed under "Fil. Sel." on Roll Chart.

2. Throw the indicated lever switches to the "A" and "B" positions as shown on the roll chart under "Lever Switches" columns "A" and "B".

3. Adjust the "Shunt Control" to reading as indicated on roll chart on "Sh. Con".

II. QUALITY TEST (Cont'd.)

4. Set "Circuit Select

5. Advance "Line V" co pointer corresponds marked "Line Check"

6. Set "Circuit Select the roll chart unde

7. Throw the indicate position as shown Switch" column "C" switches simultane

8. If all of the abov sequence, the mete tube is "Good" or

Note: When the Ci the "K" pos the meter on the scal More Than is listed type tube, is of the the Qualit dure as ou

III. BALLAST TUBES

In most cases, the ty ballast tubes indicates th ment of the tube. (For ex the most commonly used typ first letter "B" indicates

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II. QUALITY TEST (Cont'd.)

4. Set "Circuit Selector" switch to "Line" position.

5. Advance "Line V" control clockwise until meter pointer corresponds to the line at mid-scale marked "Line Check".

6. Set "Circuit Selector" to position indicated on the roll chart under "Cir. Sel." colmn.

7. Throw the indicated lever switches to the "C" position as shown on the roll chart under "Lever Switch" column "C". Throw ALL of these lever switches simultaneously.

8. If all of the above steps have been followed in sequence, the meter will indicate whether the tube is "Good" or "Poor".

Note: When the Circuit Selector Switch is in the "K" position, the tube is good if the meter reads above "Diodes OK" mark on the scale.

More Than One Listing If more than Line is listed on the roll chart for the same type tube, this indicates that the tube is of the multi-purpose type. Repeat the Quality Test for each listing procedure as outlined in paragraph II.

III. BALLAST TUBES

In most cases, the type designation stamped on ballast tubes indicates the value and circuit arrangement of the tube. (For example - let us select one of the most commonly used types, such as "BK55B". The first letter "B" indicates that a ballast section for

one or more pilot lamps is used. The second letter "K" indicates the current rating of the pilot lamp. The number "55" (or any number used in the same location) gives the total voltage drop across the resistance element. The final letter "B" indicates the circuit arrangement or base wiring. The most popular type base wiring and the corresponding settings will appear in the table that follows. It is this final letter that determines the settings for testing a ballast tube. None of the other letters or numbers have any bearing on the test.)

A. Set "Filament-Selector" switch to "BT" position.

B. Set "Circuit Selector" switch to "Short" position.

C. Place all lever switches in "B" position.

D. Insert Ballast Tube into proper socket.

E. Then, <u>one at a time</u>, throw the lever switches corresponding to the base wiring connections as indicated in table below to the "C" position and then return to "B" position.

F. The "Short" lamp should glow as <u>each</u> lever switch is thrown to the "C" position. Failure to glow indicates that a section of the Ballast Tube is open and therefore the Ballast Tube is defective. Ballast tubes are commonly constructed with two different type bases; the UX4 Prong Base, 4 pin, and the Octal 8 Prong Base, 8 pin. Use the proper settings in accordance with the base pin arrangement of the Ballast Tube under test.

Last Letter	U
A	
B	
C	
D	
E	
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F	
G	
H	
J	

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IV. <u>SPECIAL INSTRUCTIO
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In addition to the
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The settings for all "
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A. Turn the "Shu

B. Set "Circuit

C. Set "Filament
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D. Throw the in
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E. Throw lever
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R.C.P. MODEL 324 OPERATING INSTRUCTIONS

Last Letter	UX4 Prong	Octal 8 Prong
A	1,4	3,7
B	1,3,4	3,7,8
C	1,3,4	3,7,8
D	1,2,3,4	2,3,7,8
E		2,3,5,7,8
E1		3,7,8
F		2,3,7,8
G		2,3,7,8
H		1,2,3,7,8
J		1,2,3,5,7,8

Should the Ballast Tube under test not be coded in accordance with the standard RMA code, as outlined above, it will then be necessary to secure a base diagram of the Ballast tube and operate the lever switches which correspond to the terminals shown on the base diagram.

IV. SPECIAL INSTRUCTION FOR TUNING INDICATORS ("TUNING EYE" TUBE)

In addition to the Quality or Emission Test of "tuning eye" tubes, it is possible to visually check the operation of the tube under operating conditions. The settings for all "tuning eye" tubes are given in the following list:

A. Turn the "Shunt Control" to "100".

B. Set "Circuit Selector" switch to "N".

C. Set "Filament Selector" switch to reading listed under "Fil. Sel." on Roll Chart.

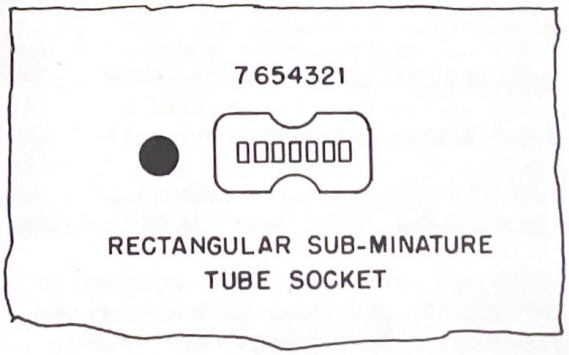
D. Throw the indicated lever switches to the "A" and "B" positions as shown on the roll chart under "Lever Switches" columns "A" and "B".

E. Throw lever switches to "C" position as shown on the following chart.

Tube Type	Tuning Eye Open	Tuning Eye Closed
2E5	4	2,4
2G5	4	2,4
6AB5	4	2,4
6AD6 (Section 1)	5	3,5
6AD6 (Section 2)	5	4,5
6AF6 (Section 1)	5	3,5
6AF6 (Section 2)	5	4,5
6AL7	3	1,3
6E5	4	2,4
6G5	4	2,4
6H5	4	2,4
6N5	4	2,4
6T5	4	2,4
6U5	4	2,4
1629	4	2,4

SPECIAL INSTRUCTIONS FOR TESTING SUBMINIATURE AND HEARING AID TUBES

Be sure the "Line V Control" is "OFF" before inserting tube in socket. "Line V Control" must be turned "OFF" between multiple tests on the same tube. Rectangular type subminiature tubes should be inserted in the small rectangular socket in the following manner.



RECTANGULAR SUB-MINATURE TUBE SOCKET

It is most important that the 2G22 etc. and CK501AX tubes, etc. dot on the panel just to the left wise, tube might burn out.

Tubes having 5 and 6 pins on so that the tube pin or lead extr dot on the tube is inserted in t extreme right contact of the sock this procedure be followed, othe will be burned out due to the ap voltage to the filament.

When the above procedure is ment pins will always be connect as well as to the number 3 or 4 hand side of the tube socket. (

Round type subminiature tu should be inserted into the sub socket.

When testing hearing aid t the leads may be inserted in th by inserting them individually pliers. Extreme caution must t leads do not touch one another "Line V Control".

V. TO TEST PILOT LAMPS (screw

A. Set "Filament Selector ment voltage as indica

Voltage Rating of Lamp
6 Volts
12 Volts
18 Volts
24 Volts

INSTRUCTIONS

Tuning Eye Closed

2,4
2,4
2,4
3,5
4,5
3,5
4,5
1,3
2,4
2,4
2,4
2,4
2,4
2,4
2,4

SUBMINIATURE
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OFF" before inserting
be turned "OFF" be-
Rectangular type
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R.C.P. MODEL 324 OPERATING INSTRUCTIONS

It is most important that the red dot on the series 2G22 etc. and CK501AX tubes, etc. should face the black dot on the panel just to the left of the socket. Otherwise, tube might burn out.

Tubes having 5 and 6 pins on leads should be inserted so that the tube pin or lead extremely opposite the red dot on the tube is inserted in the socket contact on the extreme right contact of the socket. It is important that this procedure be followed, otherwise, the tube filament will be burned out due to the application of test plate voltage to the filament.

When the above procedure is followed, the tube filament pins will always be connected to the number 1 contact as well as to the number 3 or 4 contacts from the right hand side of the tube socket. (Refer to diagram on page 10.)

Round type subminiature tubes, such as the 1AC5, should be inserted into the subminiature round 8 pin socket.

When testing hearing aid tubes having long leads, the leads may be inserted in the proper socket contacts by inserting them individually with a pair of needle nose pliers. Extreme caution must be observed to see that the leads do not touch one another before turning up the "Line V Control".

V. TO TEST PILOT LAMPS (screw base and boyonet base)

A. Set "Filament Selector" switch to the rated filament voltage as indicated in the following chart:

Voltage Rating of Lamp	Set Filament Selector Switch to
6 Volts	8
12 Volts	10
18 Volts	11
24 Volts	12

B. Throw lever switch #1 to "B" position.

C. Throw lever switch #7 to "A" position.

D. All other lever Switches in "N" position.

E. Place pilot lamp into lamp socket located in the center of the standard 7 pin socket. Lamp should glow. If it does not glow, filament is burned out.

INSTRUCTIONS FOR OPERATING CATHODE-RAY TUBE CHECKER
(All Magnetic Deflection Type TV Tubes)

I. A. Set "Line V Control" to "OFF" by turning knob fully counter-clockwise.

B. Connect power cord to 1-5-130 volt, 50-60 cycle supply. (Normal 110V. AC outlet)

II. SHORT TEST

A. Set lever switches 1 through 5 to "B" position. All other switches remain in "N" position.

B. Set "Circuit Selector" switch to "Line".

C. With TV set turned off, it is not necessary to remove picture tube from cabinet or HV lead from glass wall of tube. Remove the picture tube socket, and in its place connect duo decal end of the CR adaptor cable. The octal plug of the cable connects to the octal socket on Model # 324.

D. Slowly turn "Line V Control" clockwise until meter needle lines up with point on meter mid-scale marked "Line Check".

E. Set "Circuit
position.

F. Move lever sw
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position. Th
the "C" posit
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H. Set "Circuit
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to "OFF".

III. QUALITY TEST

A. Set "Filamen

B. Set lever sw

Position
Lever Switch

C. Set Shunt Co
wise.)

D. "Circuit Sel
Advance "Li
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NG INSTRUCTIONS

"B" position.

'A" position.

.n "N" position.

socket located in the
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)DE-RAY TUBE CHECKER
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let)

5 to "B" position.
"N" position.

to "Line".

not necessary to remove
IV lead from glass
ure tube socket, and
. end of the CR adap-
the cable connects
324.

lockwise until meter
neter mid-scale

E. Set "Circuit Selector" switch to "Short" position.

F. Move lever switches 1 and 4 to the "C" position, one at a time, and return to the "B" position. The "Short" lamp should glow in the "C" position. If it does not, the filament is open, and the tube should be discarded.

G. Move lever switch #2 to "C" position, observe any glow of "Short" lamp, and return to "B" position. Do the same with Lever Switches #3 and #5. The "Short" lamp should not glow. A steady glow indicates a shorted element or excessive leakage.

H. Set "Circuit Selector" switch back to "Line" position, set all lever switches at "N", and turn the "Line V Control" counter-clockwise to "OFF".

III. QUALITY TEST

A. Set "Filament and Range Selector" switch to "8".

B. Set lever switches as indicated below:

Position	A	B	C
Lever Switch	1	2,3,4	5

C. Set Shunt Control to 10. (Fully counter-clockwise.)

D. "Circuit Selector" switch is on "Line" position. Advance "Line V Control" clockwise until meter pointer corresponds to line on meter, mid-scale, marked "Line Check".

E. Switch "Circuit Selector" to "K". Set "CR Test" switch to "CR Tubes". (A minimum of three minutes should be allowed for tube warm up.) The meter will now read the tube quality on the special "CR Tube" scale or meter.

Note: The above settings for CR tubes are also listed at the end of the tube roll chart.

IV. REACTIVATION

Reactivation is a simple process which often extends the usable life of a tube for many months. Our experience has shown that it is effective 65% of the time, and many servicemen feel that with the picture so dim that the tube must be replaced in any event, there is little to lose. However, it is always best to explain to the customer the risk of burnout or short involved.

A. Set "Circular Selector" to "Line". Turn "Line V Control" to "OFF". Set Shunt Control to 10. Connect Adaptor Cable to picture tube and Model 324. Set "Filament & Range Selector" switch to "8".

B. Set lever switches as indicated

Position	A	B
Lever Switch	1	4

All other switches remain in Normal (N) position.

C. Slowly turn "Line V Control" clockwise until meter needle lines up with point on meter mid-scale marked "Line Check".

D. Switch the "Filament and Range Selector" to "10", and re-adjust "Line V Control" for "Line Check" position of meter needle. Keep in this position for three minutes.

E. After three minutes return Selector" switch to positi "Line V Control" to "Line in this position for ten

F. Re-check CR tube (Paragra shorts and quality as pre

G. If the tube still does no repeat step "D" for 30 mi for one hour. Recheck t

E. After three minutes return "Filament and Range Selector" switch to position "8". Re-adjust "Line V Control" to "Line Check" mark. Keep in this position for ten minutes.

F. Re-check CR tube (Paragraph II and III) for shorts and quality as previously explained.

G. If the tube still does not show "bright", repeat step "D" for 30 minutes, and step "E" for one hour. Recheck tube again.

MODEL 324 OPERATING INSTRUCTIONS

OPERATION AS A BATTERY TESTER

The Do-All Tube and Battery Tester, Model 324, has been designed to test the most popular types of batteries, dry cells, used today under the current drains recommended by the manufacturers.

The "End Life", end of useful life, point recommended by the manufacturers of one volt per cell has been set to read in the "red" portion of the "Good-Bad" scale on the meter. The middle of the white "fair" portion of the meter dial gives a reading of approximately 1.15 volts per cell and it is recommended that all batteries be discarded at this point for good operation of the unit in which they are used.

For testing of batteries the following procedure should be followed.

Note: It is not necessary to plug Model 324 into wall outlet for testing batteries.

1. Set "circuit selector" to "Battery Test".
2. Set "Filament and Range Selector" to desired battery voltage, ie: 1.5 v, 6 v etc.
3. Plug the Red test lead into the Red (+) "Battery Test" jack and attach to the positive terminal of the battery under test.
4. Plug the Black test lead into the Black (-) "Battery Test" jack and attach to the negative terminal of the battery under test.
5. Read condition of battery under test on the "Good-Bad" meter dial scale.

GUARANTI

The instrument is guarantee
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the terms of the Standard RMA gu
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at our factory, providing such
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Radio City Products Co., I
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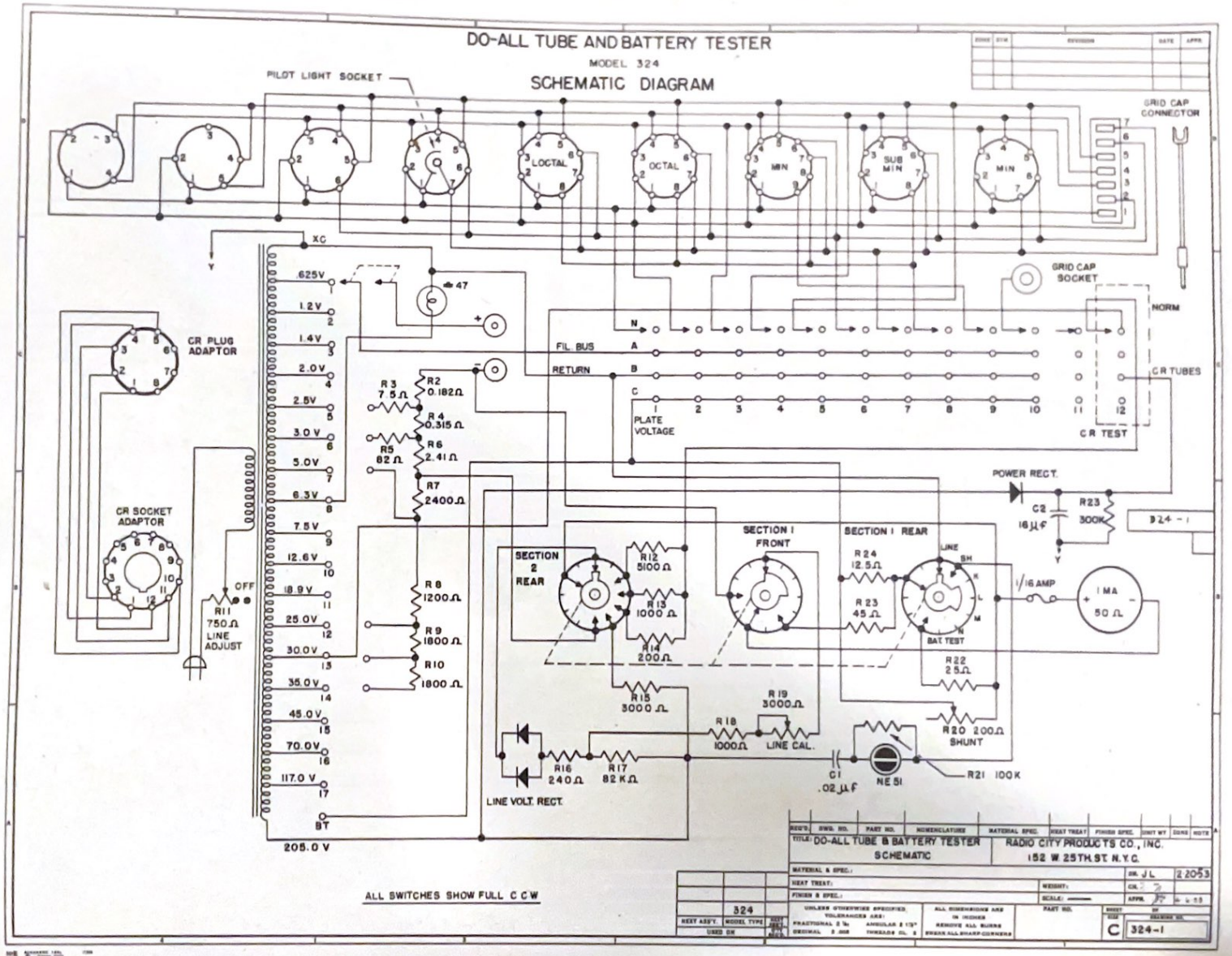
R.C.P. MODEL 324 OPERATING INSTRUCTIONS

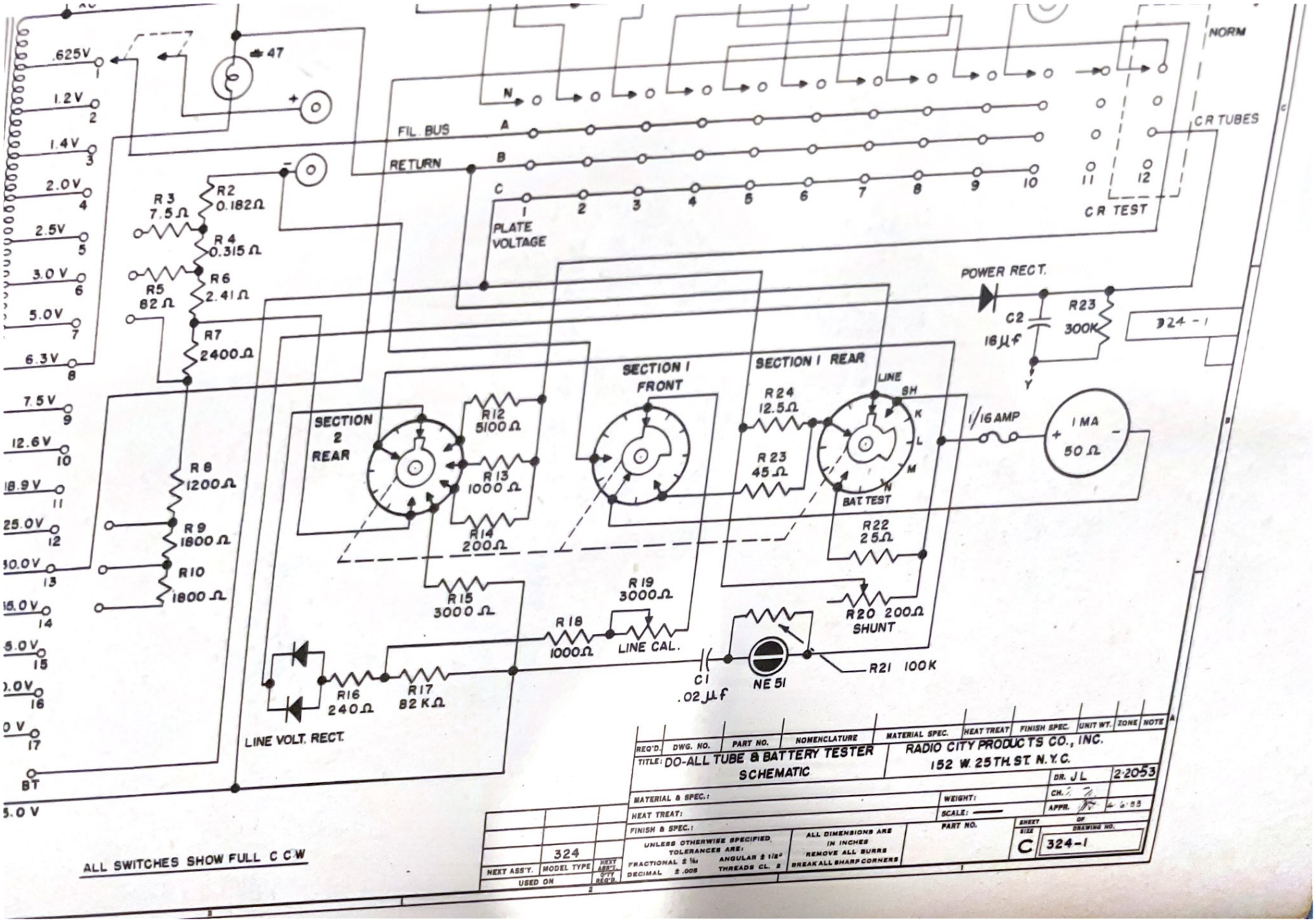
GUARANTEE

The instrument is guaranteed to be free from any defect in material and workmanship that may develop within a period of 120 days from date of purchase under the terms of the Standard RMA guarantee. Any part or parts that prove defective within this period will be replaced without charge when subjected to examination at our factory, providing such defect is, in our opinion, due to faulty workmanship or material, and not caused by tampering, abuse or normal wear.

Radio City Products Co., Inc. reserves the right to make changes in design or add improvements to instruments manufactured by them without incurring any obligation to install such changes or improvements in any instrument previously purchased.

RADIO CITY PRODUCTS COMPANY, INC.
Centre & Glendale Streets
Easton, Pennsylvania


DO-ALL TUBE AND BATTERY TESTER
MODEL 324
SCHEMATIC DIAGRAM
PILOT LIGHT SOCKET
GRID CAP CONNECTOR
LOCTAL
OCTAL
MIN
SUB MIN
MIN
GRID CAP SOCKET
NORM
CR TUBES
CR TEST
XC
Y
625V
1.2V
1.4V
2.0V
2.5V
3.0V
5.0V
6.3V
7.5V
12.6V
18.9V
25.0V
30.0V
35.0V
45.0V
70.0V
117.0V
BT
205.0 V
47
CR PLUG ADAPTOR
CR SOCKET ADAPTOR
OFF
R11 750Ω LINE ADJUST
R3 7.5Ω
R2 0.182Ω
R4 0.315Ω
R5 82Ω
R6 2.41Ω
R7 2400Ω
R8 1200Ω
R9 1800Ω
R10 1800Ω
FIL BUS
RETURN
PLATE VOLTAGE
SECTION 2 REAR
R12 5100Ω
R13 1000Ω
R14 200Ω
R15 3000Ω
R16 240Ω
R17 82KΩ
LINE VOLT. RECT.
SECTION 1 FRONT
SECTION 1 REAR
R18 1000Ω
R19 3000Ω
LINE CAL.
R24 12.5Ω
R23 45Ω
R22 25Ω
R20 200Ω SHUNT
BAT TEST
C1 .02μf
NE51
R21 100K
POWER RECT.
C2 16μf
R23 300K
1/16 AMP
1 MA
50Ω
324-1
ALL SWITCHES SHOW FULL C C W
DO-ALL TUBE & BATTERY TESTER
SCHEMATIC
RADIO CITY PRODUCTS CO., INC.
152 W 25TH ST N.Y.C.
324
USED ON
22053
C
324-1


.625V
1.2V
1.4V
2.0V
2.5V
3.0V
5.0V
6.3V
7.5V
12.6V
18.9V
25.0V
30.0V
35.0V
5.0V
BT
47
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324-1
RADIO CITY PRODUCTS CO., INC.
152 W. 25TH ST. N.Y.C.
TITLE: DO-ALL TUBE & BATTERY TESTER SCHEMATIC
DR. J.L. 2-2053
APPR. 4-6-53
SIZE C
DRAWING NO. 324-1
324